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ABSTRACT

Focusing on education and related occupations, this document is one in a series of forty-one reprints from the Occupational Outlook Handbook providing current information and employment projections for individual occupations and industries through 1985. The specific occupations covered in this document include kindergarten and elementary school teachers, secondary school teachers, college/university teachers, teacher aides, librarians, and library technicians and assistants. The following information is presented for each occupation or occupational area: a code number referenced to the Dictionary of Occupational Titles; a description of the nature of the work; places of employment; training, other qualifications, and advancement; employment outlook; earnings and working conditions; and sources of additional information. In addition to the forty-one reprints covering individual occupations or occupational areas (CE 017 757-797), a companion document (CE 017 756) presents employment projections for the total labor market and discusses the relationship between job prospects and education. (BM)

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ED158116

Education and Related Occupations

Reprinted from the
Occupational Outlook Handbook,
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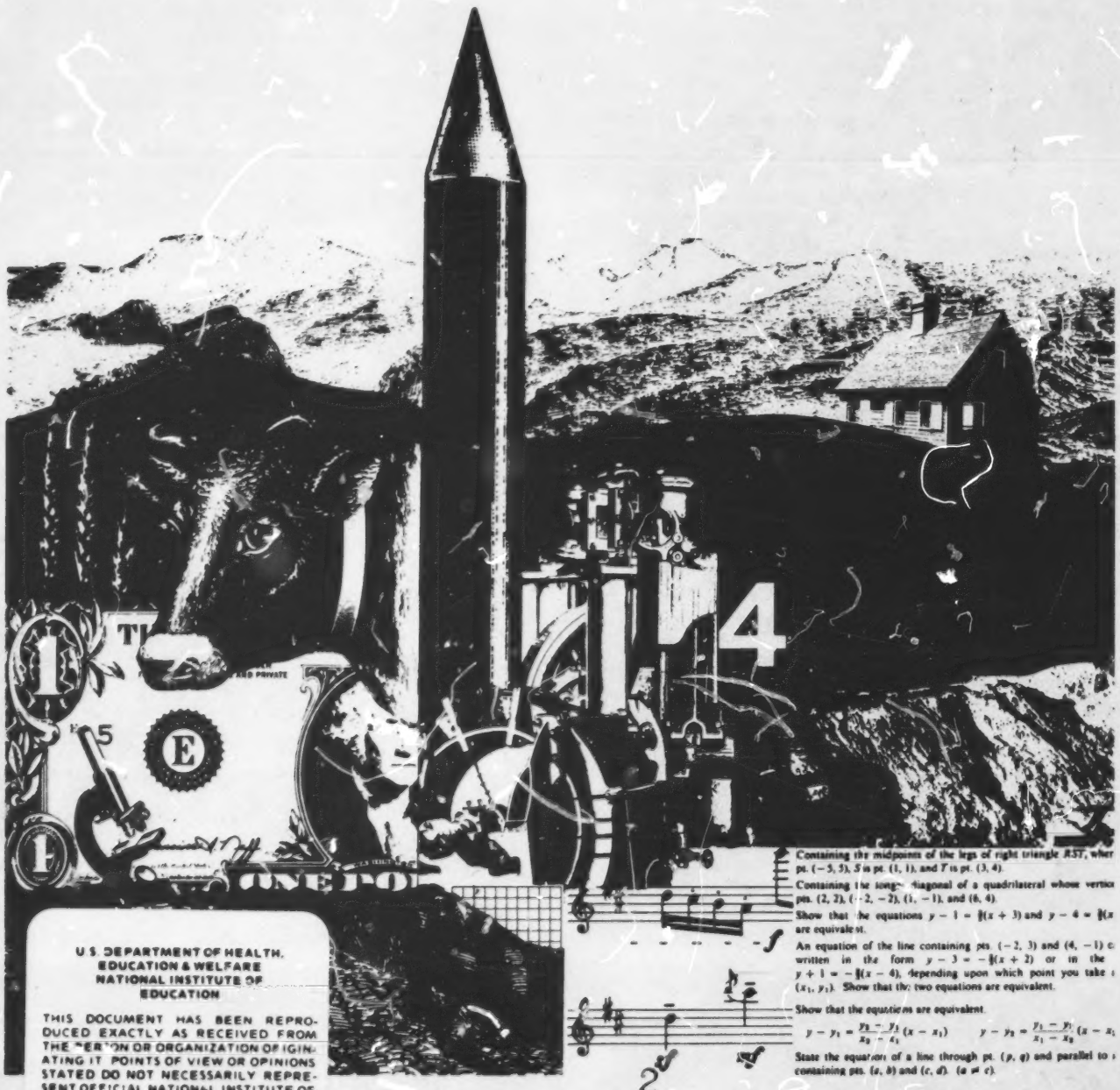
Bureau of Labor Statistics
1978

Bulletin 1955-12



Containing the midpoints of the legs of right triangle RST, wher
pts. $(-5, 5)$, S in pt. $(1, 1)$, and T is pt. $(3, 4)$.

Containing the long diagonal of a quadrilateral whose vertic
pts. $(2, 2)$, $(-2, -2)$, $(1, -1)$, and $(6, 4)$.

Show that the equations $y - 1 = \frac{1}{2}(x + 3)$ and $y - 4 = \frac{1}{2}(x$
are equivalent.

An equation of the line containing pts $(-2, 3)$ and $(4, -1)$ c
written in the form $y - 3 = -\frac{2}{3}(x + 2)$ or in the
$y + 1 = -\frac{2}{3}(x - 4)$, depending upon which point you take
(x_1, y_1). Show that the two equations are equivalent.

Show that the equations are equivalent.

$$y - y_1 = \frac{y_2 - y_1}{x_2 - x_1}(x - x_1) \qquad y - y_2 = \frac{y_2 - y_1}{x_2 - x_1}(x - x_2$$

State the equation of a line through pt. (p, q) and parallel to
containing pts. (a, b) and (c, d). $(a \neq c)$.

U.S. DEPARTMENT OF HEALTH,
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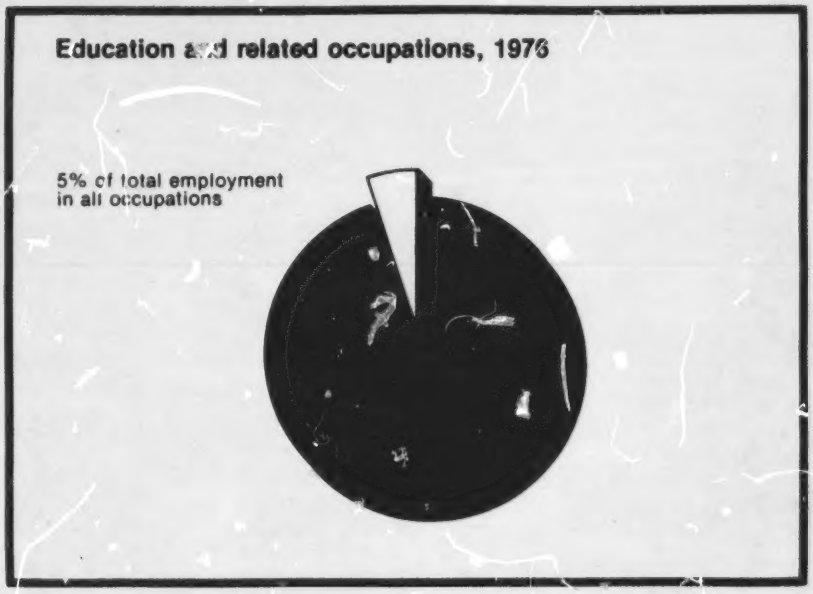
CE 017 962

EDUCATION AND RELATED OCCUPATIONS

The importance of an education has grown considerably since the birth of our Nation. Once primarily an agrarian economy, we have evolved into a highly sophisticated, technical, and urban society. Machinery and products never envisioned before are constantly being invented, calling for new jobs and skills to produce and use them. As a result, more educated workers are needed to fill a variety of positions at all levels of society.



In addition, as our economy has prospered, it has allowed people more time for personal development and leisure. No longer required to labor from early morning until dusk, workers have sought new avenues for personal enrichment. Adult education and craft courses, for example, draw increasingly larger numbers of interested students.

Teachers, teacher aides, and librarians play vital roles in the education of people of all ages. In large urban classrooms or rural county libraries, teachers and librarians are the people we turn to for information. These occupations are discussed in the following sections.

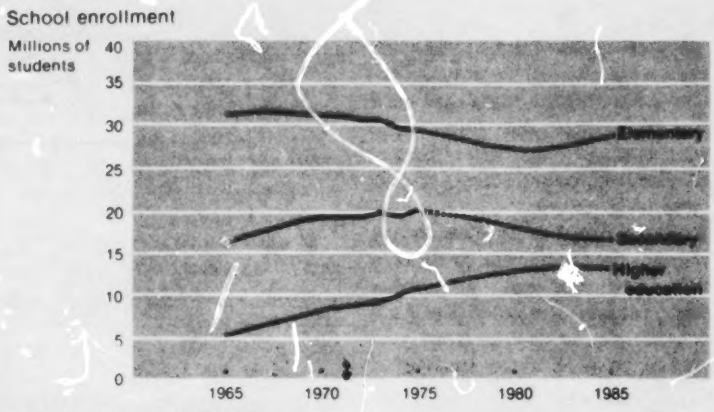
TEACHING OCCUPATIONS

Most people would agree that education is a life-long process. At every age we learn from our friends, family, and associates. We also teach others along the way, often unwittingly. But perhaps our most influential educational experiences occur during the years of formal education. During those years, students explore themselves and learn about many subjects. They make career decisions and train for productive work. Most significantly, they learn to think for themselves.

Today, more than 3 million teachers are involved at all levels of this educational process. Teachers work with people of all ages in a variety of different subjects. Some teach youngsters in their first years away from home, while others work primarily with adults who are taking courses to expand or change their job potential, or as a source of recreation. Some teachers are members of other professions who instruct part time.

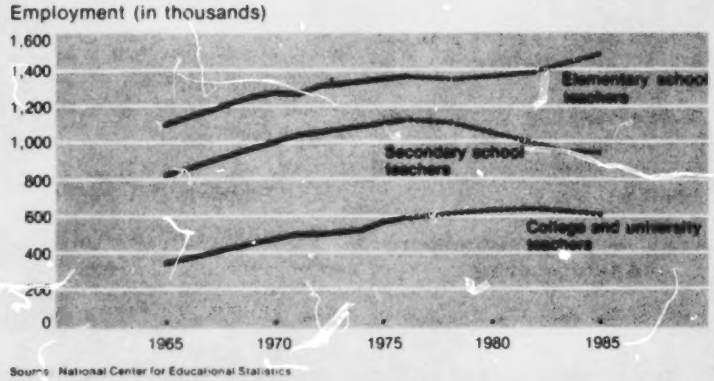
Detailed information on teaching occupations and the outlook for teachers through the mid-1980's is presented in the following statements.

Changing enrollment levels will be the primary factors affecting employment of teachers through 1985



Source: National Center for Educational Statistics

Employment of teachers generally will follow enrollment trends, rising or falling according to the number of students through 1985



Source: National Center for Educational Statistics

KINDERGARTEN AND ELEMENTARY SCHOOL TEACHERS

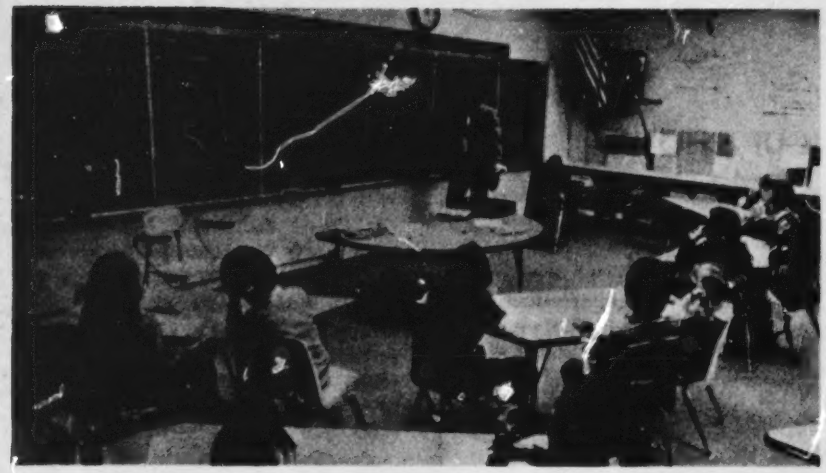
(D.O.T. 092.228)

Nature of the Work

Kindergarten and elementary school teachers play a vital role in the development of children. What is learned or not learned in these early years can, to a large measure, shape students views of themselves, the world and the process of education.

Kindergarten and elementary school teachers must introduce children to the basic concepts of mathematics, language, science, and social studies to provide a sound foundation for more advanced study in the higher grades. They also try to instill in the students good study and work habits and an appreciation for learning while closely watching and evaluating each child's performance and potential.

Elementary school teachers often devise creative means to present a specific subject matter. They may use films, slides, computers, or develop instructional games. They also arrange class trips, speakers, and class projects. All of this work involves



Most elementary school teachers instruct a single group of children in several subjects.

much time and effort, often after the regular school day is finished.

Teachers also are concerned with the social development and health of their students. They study each child's interactions with his or her classmates and discuss any problems with the parents. Teachers may, for example, meet with the parents of a child who habitually resists authority to discover the causes of these actions and work out a solution. Teachers also report any possible health problems to parents and school health officials. The teacher's primary concern is to insure that each child receives as much personalized help as required.

Most elementary school teachers instruct a single group of children in several subjects. In some schools, two teachers or more "team teach" and are jointly responsible for a group of students or for a particular subject. An increasing number of elementary school teachers specialize in one or two subjects and teach these subjects to several classes. Some teach special subjects such as music, art, or physical education, while others teach basic subjects such as English, mathematics, or social studies.

Teachers participate in many activities outside the classroom. They generally must attend regularly scheduled faculty meetings and may serve on faculty committees, such as those to revise curricula, or to evaluate the school's objectives and the student's performance. Teachers also may supervise after-school activities such as glee clubs, drama clubs, or arts and crafts classes. To stay up-to-date on educational materials and teaching techniques, they participate in workshops and other inservice activities, and take courses at local colleges and universities.

A growing number of elementary school teachers have aides to do secretarial work and help supervise lunch and playground activities. As a result, teachers can be free from routine duties to give more individual attention to students.

Places of Employment

About 1.4 million people worked as elementary school teachers in 1976. Most elementary teachers work in public schools that have six grades; however, some teach in middle schools—schools that cover the 3 or 4 years between the lower elementary grades and 4 years of high school. Only about 13 percent of elementary school teachers work in nonpublic schools.

A large proportion of all public elementary school teachers teach in urban areas, including cities and their suburbs.

Training, Other Qualifications, and Advancement

All 50 States and the District of Columbia require public elementary school teachers to be certified by the department of education in the State in which they work. Some States also require teachers in private and parochial schools to be certified.

To qualify for certification, a teacher must have a bachelor's degree from an institution with an approved teacher education program. Besides a bachelor's degree, which provides the necessary liberal arts background, States require that prospective teachers have student-teaching and other education courses.

In 1976, 14 States required teachers to get supplementary postgraduate education—usually a master's degree or a fifth year of study—after their initial certification. Some States required U.S. citizenship; some an oath of allegiance; and several a health certificate.

Local school systems sometimes have additional requirements for employment. Students should write to the local superintendent of schools and to the State department of education for information on specific requirements in the area where they want to teach.

In addition to meeting educational and certification requirements, teachers should be creative, dependable, and patient. Most important, they should want to be directly involved in the educational and emotional development of children. Competence in handling classroom situations also is important.

As a teacher gains experience, he or she may advance within a school system or transfer to another which recognizes experience and has a higher salary scale. Some teachers may advance to supervisory, administrative, or specialized positions. Often, however, these positions require additional training and certification. As a result, for most teachers, advancement consists of higher pay rather than more responsibility or a higher position.

Employment Outlook

Kindergarten and elementary school teachers are expected to face competition for jobs of their choice through the mid-1980's. If patterns of entry and reentry to the profession continue in line with past trends, the number of persons qualified to teach

in elementary schools will exceed the number of openings.

The basic sources of teacher supply are recent college graduates qualified to teach at the elementary level and teachers seeking reentry to the profession. Reentrants, although more experienced, will face increasing competition from new graduates, who command lower salaries and have more recent training.

Pupil enrollment is the basic factor underlying the need for teachers. Because of fewer births in the 1960's, elementary enrollments have been on the decline since 1967, when they peaked at nearly 32 million. The National Center for Education Statistics projects that by 1982 the downward enrollment trend will halt at a level of 28 million, and enrollments again will advance to about 29 million by 1985.

Teachers will be needed to fill new positions created by larger enrollments; to replace those who are not now certified; to meet the expected pressure for an improved pupil-teacher ratio; and to fill positions vacated by teachers who retire, die, or leave the profession for other reasons.

However, a decline in the projected number of children born over the next decade could lessen the demand for teachers. While the trend has not been clearly established, since 1970 women have continued to have fewer children, and according to a recent survey, they expect to continue having smaller families than were common 10 years ago.

Several factors could alter the outlook for teachers. Increased emphasis on early childhood education, on special programs for disadvantaged children, and on individual instruction may result in larger enrollments, smaller student-teacher ratios, and consequently an increased need for teachers. Possible budget restraints for educational services, on the other hand, might limit expansion.

Earnings and Working Conditions

According to the National Education Association, public elementary school teachers averaged $11,870 a year in 1976. Average earnings in 1976 were more than one and one-third times as much as the average earnings for all nonsupervisory workers in private industry, except farming. Generally, States in the Northeast and in the West paid the highest salaries.

Collective bargaining agreements cover an increasingly large number of teachers. In 1976, 31 States had enacted laws that required collective bargaining in the teacher contract negotiation process. Most public school systems that enroll 1,000 students or more bargain with teacher organizations over wages, hours, and the terms and conditions of employment.

Public school systems enrolling 6,000 or more pupils paid teachers with a bachelor's degree average starting salaries of $8,233 a year in 1974-75. Those with a master's degree earned a starting average of $9,159 a year.

Public elementary school teachers worked an average of about 36-1/2 hours a week in 1976. Additional time spent preparing lessons, grading papers, making reports, attending meetings, and supervising extracurricular activities increased the total number of hours to about 46.

In addition to their regular teaching assignments, some elementary school teachers teach summer sessions, take courses, or work at other jobs, such as camp counselors. Most elementary school teachers work a traditional two-semester, 9-month school year. Some, however, work in year-round schools where they work an 8-week session, are off 1 week, and have a longer midwinter break. This type of schedule may make finding additional employment outside of the school system difficult.

Teachers spend much of their time walking, kneeling, or even sitting on the floor. For example, kindergarten teachers may join their students on the floor to finger paint, cut out pictures, or do other crafts.

Employment in teaching is steady, and business conditions usually do not affect the market for teachers. In 1976, 38 States and the District of Columbia had tenure laws that insured the jobs of teachers who had successfully taught for a certain number of years.

Sources of Additional Information

Information on schools and certification requirements is available from local school systems and State departments of education.

Information on the Teacher Corps, internships, graduate fellowships, and other information on teaching may be obtained from:

U.S. Department of Health, Education, and Welfare, Office of Education, Washington, D.C. 20202.

Other sources of general information are:

American Federation of Teachers, 1012 14th St. NW., Washington, D.C. 20005.

National Education Association, 1201 16th St. NW., Washington, D.C. 20036.

SECONDARY SCHOOL TEACHERS

(D.O.T. 091.228)

Nature of the Work

The high school years are the years of transition from childhood to young adulthood. They are the years when students delve more deeply into subject matter introduced in elementary school and learn more about themselves and the world. It is also a time of preparation for their future lives as citizens and jobholders. Secondary school teachers have a direct role in this process.

The primary function of the secondary school teacher is to instruct students in a specific subject such as English, mathematics, social studies, or science. Within a teacher's specialized subject area, he or she may teach a variety of courses. A social studies teacher, for example may instruct two 9th grade classes in American History, two 12th grade classes in Contemporary American Problems, and another class in World Geography. For each class, the teacher develops lesson plans, prepares and gives examinations, and arranges other activities, such as a class project to devise an urban redevelopment plan for the city.

Teachers must strive to create an atmosphere for learning.

Teachers also must design their classroom presentations to meet the individual needs and abilities of their students. They may arrange tutoring for students, or give advanced assignments for highly motivated pupils. Recognizing the needs of each student can be difficult because most teachers conduct five separate classes a day.

Teachers use a variety of instructional materials including films, slides, and computer terminals. They also may arrange for speakers or trips to supplement their classroom lectures such as a visit to the planetarium after a discussion on the earth's rotation.

Some teachers train students for specific jobs after graduation such as welding, automechanics, or distributive education. These teachers instruct with the actual tools of the trade whether they be adding machines or an 8-cylinder car engine.

Secondary school teachers also supervise study halls and homerooms, and attend meetings with parents and school personnel. Often they work with student groups outside of class to help solve specific problems. Teachers also participate in workshops and college classes to keep up-to-date on their subject specialty and on current trends in education.

In recent years, teachers have been able to spend more time teaching due to the increased availability of teacher aides who perform secretarial work, grade papers, and do other routine tasks.

Places of Employment

In 1976, more than 1 million teachers taught in secondary schools. More than 90 percent of them taught in public schools. Although they work in all parts of the country, teachers are concentrated in cities and in suburban areas.

According to a recent survey, slightly more than one-half of all public secondary teachers teach in senior high schools; about one-third teach at the junior high level. About one-tenth teach in junior-senior high schools, and a very small number are elementary-secondary combination teachers.

Training, Other Qualifications, and Advancement

All 50 States and the District of Columbia require public secondary school teachers to be certified. Many States also require certification of secondary teachers in private and parochial schools.

The minimum educational requirement for certification is a bachelor's degree. In 1976, the District of Columbia was the only jurisdiction requiring a master's degree for initial certification as a senior high school teacher. Fourteen States, however, have specified that a secondary school teacher must get additional education, usually a fifth year of study or a master's degree, within a certain period after beginning employment. As a result, more and more secondary school teachers are obtaining advanced degrees.

The educational requirements for secondary school teachers vary by State and by school system. Approved colleges and universities in every State offer programs that include the education courses and the student-teaching that States require. They also offer the academic courses that are necessary to qualify teachers in the various subject specialties taught at the secondary level.

States and local jurisdictions often have general teacher requirements, such as the recommendation of the college, a certificate of health, and U.S. citizenship. Prospective teachers may get complete information on such educational and general requirements from each State department of education and from the superintendent of schools in each community.

Aside from educational requirements, a secondary school teacher must want to work with young people, have an interest in a special subject, and have the ability to motivate students and to relate knowledge to them.

Education and experience provide the primary basis for advancement, usually in the form of higher salaries rather than a different job. Advancement to supervisory and administrative positions usually requires at least 1 year of professional education beyond the bachelor's degree and several years of successful classroom teaching. Only a small proportion of secondary school teachers, however, advance to administrative positions.

Some experienced teachers with specific preparation may work as special school service personnel, such as school psychologists, reading specialists, or guidance counselors. Often these jobs require special certification as well as special education.

Employment Outlook

The supply of secondary school teachers through the mid-1980's will

greatly exceed anticipated requirements if recent trends of entry into the profession continue. As a result, prospective teachers are likely to face keen competition for jobs.

The prime sources of teacher supply are recent college graduates qualified to teach secondary school and teachers seeking to reenter the profession. Although reentrants have experience in their favor, many schools may prefer to hire new graduates who command lower salaries and whose training is more recent.

Pupil enrollment is the basic factor underlying the demand for teachers. The National Center for Education Statistics projects that enrollment in secondary schools will decline and, in turn, reduce the demand for teachers. As a result, over the 1976-85 period, nearly all teaching positions will stem from the need to replace teachers who die, retire, or leave the profession for other reasons. Thus, an increasing proportion of prospective teachers will have to consider alternatives to secondary school teaching.

Although the overall outlook for secondary teachers indicates a highly competitive market, employment conditions may be more favorable in certain fields. According to a recent survey, the supply of teachers of vocational subjects was not adequate to meet the demand. Mathematics, natural sciences, and physical sciences should not experience as large an oversupply as some other subjects.

Earnings and Working Conditions

According to the National Education Association, public secondary school teachers averaged $12,395 per year in 1976. This is 1 1/2 times the average for nonsupervisory workers in private industry, except farming. Generally, salaries were higher in the Northeast and in the West than they were in the Southeast and in the Middle States.

In school systems with enrollments of 6,000 or more, beginning teachers with a bachelor's degree earned average salaries of $8,233 in the school year 1974-75. New teachers with a master's degree started at $9,159 a year. Beginning teachers could expect regular salary increases as they gained experience and additional education.

A recent survey of public school teachers indicated that the average required school week for those in secondary schools was 37 hours. However, when all teaching duties, including meetings, lesson preparation, and other necessary tasks are taken into consideration, the total number of hours spent working each week was slightly more than 48.

In some schools, teachers receive supplementary pay for certain school-related activities such as coaching in sports and working with students in extracurricular activities, such as music, dramatics, or school publications. Some public school teachers also work in their school systems during the summer. Others hold summer jobs outside the school system.

While many teachers work the traditional 9-month school year with a 3-month summer vacation, some districts have converted to a year-round schedule. Teachers on this type of schedule may work 8 weeks, be on vacation for 1 week, and have a 5-week midwinter break. Laws in 38 States and the District of Columbia ensure the employment of those who have achieved tenure status. Laws requiring collective bargaining of wages, hours, and the terms and conditions of employment cover increasing numbers of teachers.

Sources of Additional Information

Information on schools and certification requirements is available from local school systems and State departments of education.

Information on the Teacher Corps, internships, graduate fellowships, and other information on teaching may be obtained from:

U.S. Department of Health, Education, and Welfare, Office of Education, Washington, D.C. 20202.

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National Education Association, 1201 16th St. NW., Washington, D.C. 20036.

COLLEGE AND UNIVERSITY TEACHERS

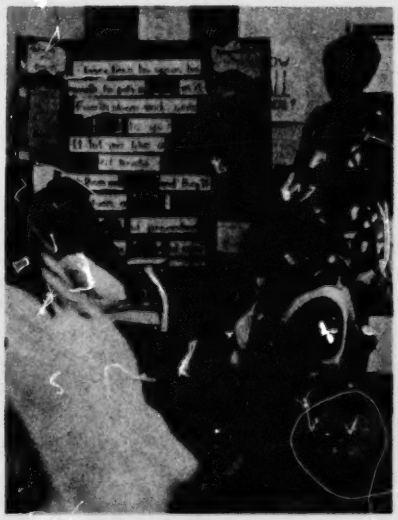
(D.O.T. 090.168 and .228)

Nature of the Work

Each year thousands of Americans enter college. Some view college as a personal enrichment experience. Others seek higher education to obtain a lucrative and interesting job. Many persons attend college for a variety of reasons. To meet these diversified demands, colleges and universities hire well-educated teachers to provide instruction in various subjects.

The primary function of the college or university teacher is to present an in-depth analysis of a particular subject matter. Many teachers conduct a variety of courses such as a basic, freshman English composition course and an advanced poetry class for students majoring in English. Many instruct undergraduates only, while some instruct both undergraduates and graduate students. Still fewer instruct only graduate students. Usually, the more experienced and educated teachers conduct the higher level classes.

College and university teachers use various presentations in their classes, depending on the subject, interest, and level of their students. Some conduct large lecture classes



Professor instructing teacher education class.

for basic courses while others lead advanced seminars with only a few students. Still others work primarily in laboratories for subjects such as biology, engineering, or chemistry. Some teachers have the aid of teaching assistants who usually are studying for advanced degrees. Closed-circuit television, tape recorders, and other machines frequently are used.

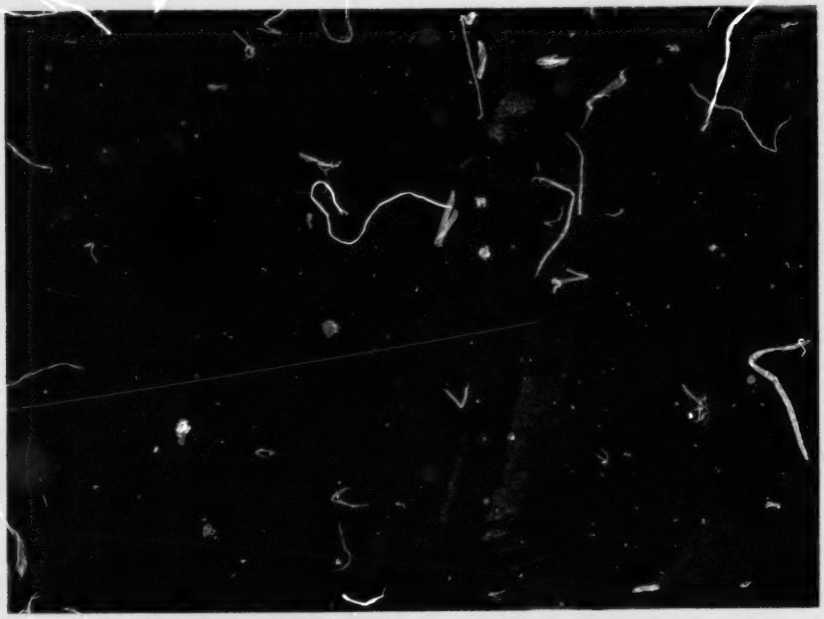
To be effective, college teachers must keep up with developments in their field by reading current material, participating in professional activities, and conducting research. Some publish books and articles. The importance of research and publication varies from one institutional level to another. For example, a recent survey indicated that more than one-third of the Ph. D. faculty in doctorate level science and engineering departments spent more than half of their time in research activities. Research usually is stressed more at 4-year colleges and universities than at junior and community colleges.

In addition to time spent on preparation, instruction, and evaluation, college and university teachers participate in faculty activities; work with student organizations and act as student advisors; work with the college administration; and in other ways serve the institution and the community. Those who are department heads have supervisory and administrative duties.

Places of Employment

In 1976, about 593,000 teachers worked in more than 3,000 colleges and universities. About 70 percent of them taught in public institutions. An estimated 441,000 were full-time senior staff; about 145,000 were part-time senior staff; and 7,000 were full-time junior instructors. In addition, there were thousands of part-time assistant instructors, teaching fellows, teaching assistants, or laboratory assistants who aided these teachers while studying for their advanced degrees.

Of full-time faculty, about one-third teach in universities; about two-fifths work in 4-year colleges; and about one-fifth teach in 2-year colleges. About two-thirds of the faculty in universities and 4-year colleges teach in public institutions; more than nine-tenths of the faculty in 2-year institutions work in public junior and community colleges.



Many college teachers, in addition to teaching, participate in professional activities and conduct research.

Training, Other Qualifications, and Advancement

Most college and university faculty are classified in four academic ranks: instructors, assistant professors, associate professors, and full professors. About 75 percent of all faculty are assistant, associate, or full professors, with the three ranks equally distributed. Twenty percent are instructors.

Most inexperienced persons are hired as instructors and must have at least a master's degree. To advance to higher ranks, instructors need additional training plus experience. Assistant professors usually need a year of graduate study beyond the master's degree and at least a year or two of experience as an instructor. Appointments as associate professors frequently demand the doctoral degree and an additional 3 years or more of college teaching experience. For a full professorship, the doctorate, extensive teaching experience, and published articles and books usually are essential.

In addition to advanced study and college-level teaching experience, outstanding academic, administrative, and professional contributions influence advancement. Research, publication, and work experience in a subject area may hasten advancement.

Employment Outlook

College and university teaching candidates are expected to face keen competition through the mid-1980's. Although demand for these teachers is expected to increase, the number of master's and Ph. D. degree recipients is expected to greatly exceed all openings resulting from growth and separations from the profession. The number of Ph. D. recipients alone, in fact, is likely to exceed the expected number of openings. Therefore, an increasing proportion of prospective college teachers, especially those with only master's degrees, will have to seek nonacademic jobs. Government and private industry should provide some positions, but some persons holding graduate degrees may find it necessary to enter occupations that have not traditionally required advanced study.

Those seeking a teaching position will find the best opportunities at public colleges and universities.

The basic factor underlying the demand for teachers is college enrollment. During the 1960's and early 1970's, teacher employment expanded due to growth in both the number of college-age persons and the proportion of 18- to 21-year-olds enrolled in college. Enrollments are expected to increase through the mid-1980's and then decline somewhat, but to a level higher than at present. As a result, the total number of teachers needed over the period is expected to rise.

The type and level of the institution and the extent to which it wishes to upgrade its faculty also will influence the demand for teachers. Although enrollments in the 1970's are expected to stabilize in 4-year colleges and universities, many institutions, including junior and community colleges, may want to hire additional Ph. D.'s to upgrade their faculties. This, coupled with an increasingly large supply of Ph. D.'s, will make it especially difficult for master's degree holders to find teaching positions in 4-year institutions.

Earnings and Working Conditions

Earnings varied widely according to faculty rank and type of institution. In general, teachers in public institutions (in both 2-year and 4-year schools) averaged higher salaries than teachers in private schools in 1975-76 Salaries ranged from an average minimum of $7,272 for instructors in private 2-year institutions, to an average maximum of $25,387 for professors at 4-year public institutions.

In 1975-76, about one-third of all institutions paid according to salary schedules by rank. On the average, more public than private institutions had these schedules. In institutions without schedules, a college senate often determined salaries according to a general set of criteria.

Since about 2 out of 3 college teachers have 9- to 10-month contracts, many have additional summer earnings from research, writing for publication, or other employment. Royalties and fees for speaking engagements may provide additional earnings. Some teachers also undertake additional teaching or research projects or work as consultants.

College and university teachers also may enjoy certain benefits, including tuition waivers for dependents, housing allowances, travel allowances, and paid leaves of absence. Colleges typically grant a semester's leave after 6 or 7 years of employment.

About 85 percent of all college and university teachers work in institutions that have tenure systems. Of the full-time teachers employed in these institutions, over one-half are tenured. Under a tenure system, a teacher usually receives 1-year contracts during a probationary period ranging from 3 to 7 years; some universities award 2- or 3-year contracts. After the probationary period, institutions consider teachers for tenure (the assurance of continuing employment with freedom from dismissal without cause).

Most teachers work in institutions run on a semester basis; others work in schools that are on trimesters with shorter breaks between each school session.

College teachers usually have flexible teaching schedules. According to a recent survey, the undergraduate faculty in 4-year colleges and universities normally teach 12 hours a week and seldom more than 14 or 15 hours. Graduate faculty have a teaching load of about 10 hours a week. In addition to time spent in the classroom, college and university teachers devote much time to preparation and other duties. Overall, full-time faculty spend about 55 hours a week on school-related activities. For faculty in junior and community colleges, the normal teaching load is slightly heavier, but the total number of hours on the job are fewer.

Sources of Additional Information

Information on college teaching as a career is available from:

U.S. Department of Health, Education, and Welfare, Office of Education, Washington, D.C. 20202.

American Council on Education, 1 Dupont Circle NW., Washington, D.C. 20036.

American Federation of Teachers, 1012 14th St. NW., Washington, D.C. 20065.

Professional societies in the various subject fields will generally provide information on teaching requirements and employment opportunities in their particular fields. Names and addresses of societies are given in the statements on specific professions elsewhere in the *Handbook*.

TEACHER AIDES

Nature of the Work

Teacher aides free teachers of routine tasks that persons without extensive training in teaching can handle. They support teachers directly in work involved with teaching students and, indirectly, in nonteaching activities. Aides may work in the classroom under the teacher's supervision or have duties assigned outside the learning environment.

Aides' responsibilities vary greatly by school district. In some areas, aides work directly in the instruction of children. Under the supervision and guidance of the teacher, they help students individually or in small groups. An aide might listen to one student read, for example, or help another find information needed for a report, or watch as a third practices or demonstrates a skill. Sometimes the teacher has an aide take charge of a special project for a group of students, such as preparing equipment for a science demonstration.

In other areas, teacher aides primarily handle many of the routine tasks that otherwise would be left to the teacher. They may grade tests and papers, check homework, and keep health and attendance records. Also, secretarial duties such as typing, filing, and duplicating materials for the teacher's use may be part of the aide's job. Sometimes the duties of teacher aides include stocking supplies, preparing materials for use by students, and operating audiovisual equipment. They also may supervise students during lunch and recreation periods and school bus loading and help keep the classroom in order.

Some aides work directly in the instruction of children.

Places of Employment

In 1976, about 320,000 persons worked as teacher aides. While aides work in both elementary and secondary schools, they are concentrated in the early grades. Large city schools or schools in metropolitan areas surrounding large cities employ a large proportion of aides. Schools with large enrollments are more likely than small schools to employ teacher aides, and they more often hire them on a full-time, regular basis.

Training, Other Qualifications, and Advancement

Training requirements for teacher aides vary widely. Some schools hire beginning aides with a high school diploma; some do not require even a high school education. Other employers may want aides to have some college training or a bachelor's degree. Areas that delegate a significant amount of classroom responsibility to aides usually require more training than those districts which primarily assign aides to clerical or monitor jobs.

Teacher aides may receive their training for classroom work in a preservice program or on the job. A growing number of junior and community colleges offer teacher aide programs. Upon completion of one of these programs, the student is awarded an associate degree and is prepared to work directly in the classroom. In 1976, there were about 270 such programs.

In training programs, teacher aides learn how to help the classroom teacher work with students. Aides are taught to operate audiovisual equipment, administer first aid, and handle recordkeeping activities. They also learn to make charts and other instructional materials and practice techniques for making bulletin boards and working with other art media. In addition, teacher aides are made familiar with the organization and operation of a school, and they learn about the methods used to teach handwriting, reading, math, science, and other school subjects.

Personal traits are among the most important qualifying factors for the teacher aide's job. Aides should be able to work with children and to handle classroom situations with fairness and patience. Preference may be given in hiring to those with previous experience working with children. Aides also must demonstrate initiative and a willingness to follow the classroom teacher's directions. They must have basic speech and writing skills and be able to communicate effectively with students and teachers. Clerical skills may be necessary also.

Some schools have certain regulations regarding the hiring of teacher aides. Applicants may be required to have a family income below a certain level or to be parents of children in the school district. Sometimes persons living in the school community are given preference in hiring. In addition, health regulations may require that teacher aides pass a physical examination. Eight States (Alabama, Delaware, Georgia, New Mexico, New York, Ohio, Vermont, and Wisconsin) have established criteria for teacher aide employment that require aides to have permits or certificates. Thirty-eight States have issued general guidelines for hiring aides. In other areas, the city or county board of education may set standards for employment of aides. The local superintendent of schools and the State department of education can provide information on specific requirements for employment in a particular area.

Advancement for teacher aides, usually in the form of higher earnings or increased responsibility, comes primarily with experience. Some school districts provide release time so that aides may take courses. In this way, aides eventually can earn bachelor's degrees and become certified teachers.

Employment Outlook

Employment of teacher aides is expected to rise much faster than the average for all occupations through the mid-1980's. If past trends contin-

ue, the proportion of teacher aides in relation to teachers being hired is expected to increase. Actual job prospects, however, will vary by district. Budget constraints may adversely affect demand for these workers in some areas, while other districts, unable to afford additional more highly paid teachers, may hire aides to lessen teachers' clerical duties. In addition, more aides will be needed to fill openings as workers die, retire, or transfer to other occupations.

Earnings and Working Conditions

According to the limited information available, salaries of teacher aides ranged from $2 to over $5 an hour in 1975. Earnings varied by region and also by the work experience and academic qualifications of the aide. Most aides, usually those covered by collective bargaining agreements, have health and welfare benefits similar to those of the teachers in their schools.

Teacher aides may work full time or part time. They may work inside or outdoors and may spend much of their time standing, walking, or kneeling.

Sources of Additional Information

Information on junior college 1- and 2-year programs for teacher aides is available from:

The American Association of Junior Colleges, One Dupont Circle NW., Washington, D.C. 20036.

Additional information on the occupation may be obtained from:

National Education Association, 1201 16th St. NW., Washington, D.C. 20036.

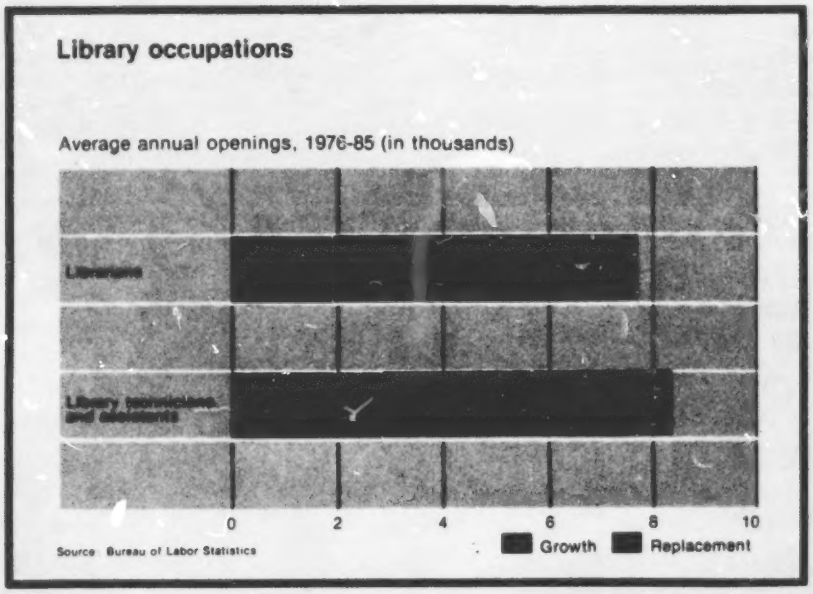
American Federation of Teachers, 1012 14th St. NW., Washington, D.C. 20005.

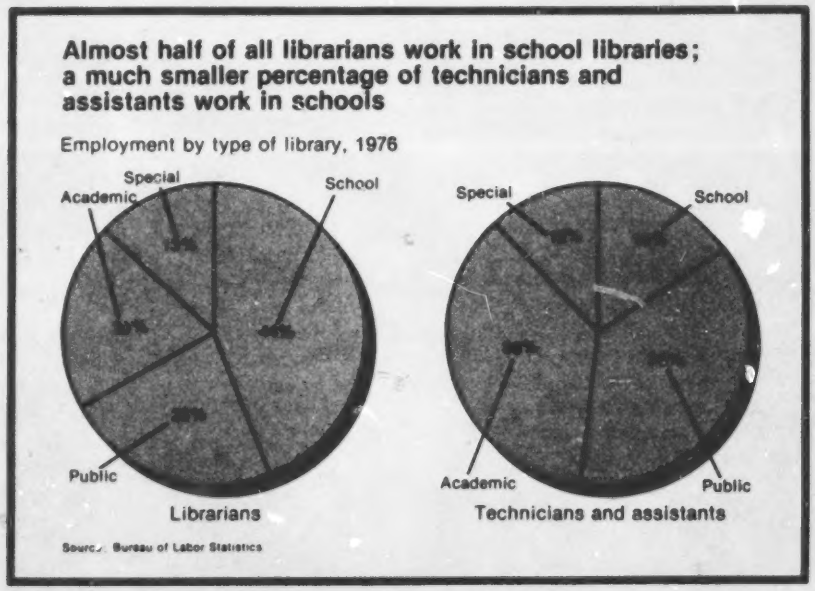
LIBRARY OCCUPATIONS

Before the written language was developed, people passed on information through the spoken word. Each generation told the next what they had learned about the world, the family, and the skills needed for survival. Often, however, details could be lost or changed substantially through the ages.

As the years passed, people learned to express their ideas in drawings and then in a written manner. Alphabets came into existence. People no longer relied on their memories for information—they could seek out what they needed to know in scrolls or books. Today, we can research what occurred centuries ago, or read of the accomplishments of modern scientists simply by giving to one source—the library.

Libraries are storehouses of information containing the history of the universe. But they also can be confusing places containing many large rooms filled with stacks of books. Librarians and library technicians and assistants help us find the information we want. They provide us with access to books, periodicals, and other printed materials, as well as less conventional forms of information such as microfilms, slides, and computer tapes. The following statements describe their work in more detail.





LIBRARIANS

(D.O.T. 100.118 through .388)

Nature of the Work

Librarians make information available to people. They serve as a link between the public and the millions of sources of information by selecting and organizing materials, making them accessible, and assisting in their use.

Library work is divided into two areas: user services and technical services. Librarians in user services—for example, reference and children's librarians—work directly with the public helping them find the information they need. Librarians in technical services—such as acquisition librarians—are primarily concerned with preparing materials for use and do not frequently deal with the public. They order, classify, and catalog all types of materials.

The size of the library usually determines the scope of a librarian's job. In small libraries, the job may include both user and technical services. The librarian may select and or-

ganize materials, publicize services, do research, and give reference help to groups and individuals. In large libraries, librarians usually specialize in either user or technical services and specialize further in certain subject areas, such as science, business, the arts, or medicine. A librarian in technical services who specializes in engineering, for example, may review books or write summaries of articles on new engineering developments.

Regardless of the nature of their work, librarians generally are classified according to the type of library in which they work: public libraries, school media centers, college and university libraries, and special libraries.

Public librarians serve all kinds of people—children, students, research workers, teachers, and others. Increasingly, public librarians provide special materials and services to culturally and educationally deprived persons, and to persons who, because of physical handicaps, cannot use conventional print.

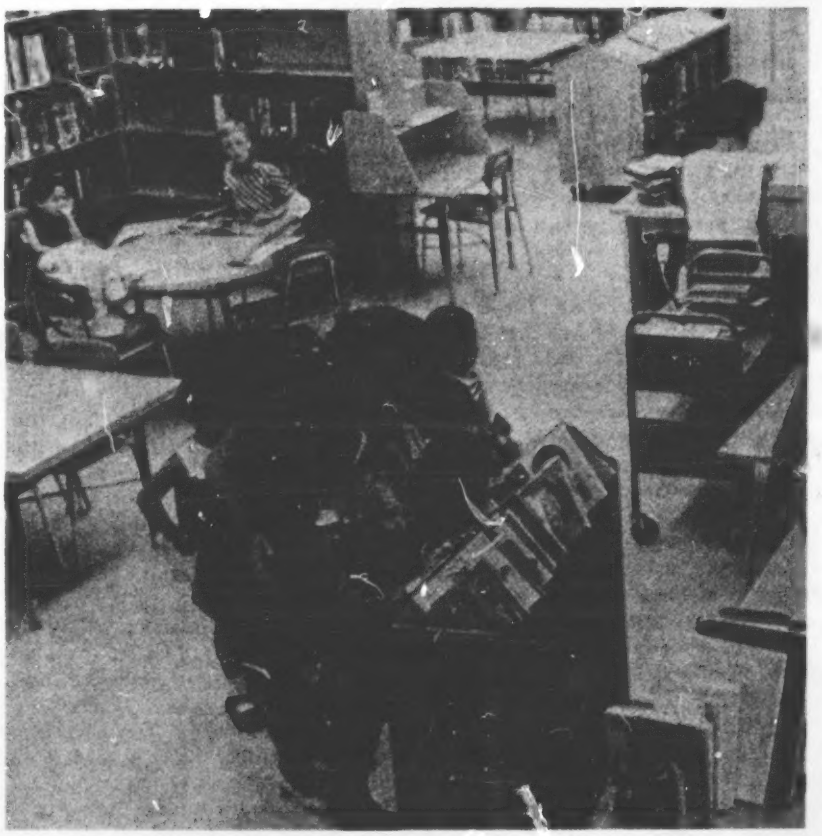
The professional staff of a large public library system may include the chief librarian, an assistant chief, and several division heads who plan and coordinate the work of the entire library system. The system also may include librarians who supervise branch libraries and specialists in certain areas of library work. The duties of some of these specialists are described briefly in the following paragraphs.

Acquisition librarians purchase books and other materials to maintain a well-balanced library that meets the needs and interests of the public. *Catalogers* classify these materials by subject and otherwise describe them to help users find what they are looking for. *Reference librarians* answer specific questions and suggest sources of information.

Some librarians work with specific groups of readers. *Children's librarians* serve the special needs of young people by finding books they will enjoy and showing them how to use the library. They may plan and conduct special programs such as story hours or film programs. Their work in serving children often includes working with school and community organizations. *Adult services librarians* suggest materials suited to the needs and interests of adults. They may cooperate in planning and conducting education programs, such as community development, public affairs, creative arts, problems of the aging, and home and family. *Young adult services librarians* help junior and senior high school students select and use books and other materials. They may organize programs of interest to young adults, such as book or film discussions or concerts of recorded music. They also may coordinate the library's work with school programs. *Extension or outreach librarians working in bookmobiles* offer library services to people not adequately served by a public library such as those in inner city neighborhoods, migrant camps, rural communities, and institutions, including hospitals and homes for the aged.

School librarians instruct students in the use of the school library and help them choose from the media center's collection of print and nonprint materials items that are related to their interests and to classroom subjects. Working with teachers and supervisors, school librarians familiarize students with the library's resources. They prepare lists of materials on certain subjects and help select materials for school programs. They also select, order, and organize the library's materials. Increasingly, the school library is viewed as part of the entire instructional system rather than a resource that students use 1 or 2 hours a week. As a result, the scope of the duties of many school librarians' has widened. In some schools, librarians work with teachers to develop units of study or independent study programs, and also may participate in team teaching.

Very large high schools may employ several school librarians, each responsible for a particular function



School librarian showing students how to use the library.

of the library program or for a special subject area. *Media specialists*, for example, develop audio-visual programs to be included in or to supplement the curriculum. They also may develop materials and work with teachers on curriculum.

College and university librarians serve students, faculty members, and research workers in institutions of higher education. They may provide general reference service or may work in a particular subject field, such as law, medicine, economics, or music. Those working on university research projects operate documentation centers that use computers to record, store, and retrieve specialized information. College and university librarians may teach classes in the use of the library.

Special librarians work in libraries maintained by government agencies and by commercial and industrial firms, such as pharmaceutical companies, banks, advertising agencies, and research laboratories. They provide materials and services covering subjects of special interest to the organization. They build and arrange the organization's information resources to suit the needs of the library users. Special librarians assist users and may conduct literature searches, compile bibliographies, and in other ways provide information on a particular subject.

Others called *information science specialists*, like special librarians, work in technical libraries or information centers of commercial and industrial firms, government agencies, and research centers. Although they perform many duties of special librarians, they must possess a more extensive technical and scientific background and a knowledge of new techniques for handling information. Information science specialists abstract complicated information into condensed, readable form, and interpret and analyze data for a highly specialized clientele. Among other duties, they develop classification systems, prepare coding and programming techniques for computerized information storage and retrieval systems, design information networks, and develop microfilm technology.

Information on library technicians and assistants is found in a separate statement in the *Handbook*.

Places of Employment

An estimated 128,000 professional librarians were employed in 1976. School librarians accounted for more than two-fifths of the total, and public libraries and colleges and universities each employed about one-fifth. The remainder worked in special libraries, including those in government agencies, or in institutions such as correctional facilities and hospitals. A small number served as consultants, as State and Federal Government administrators, and as faculty in schools of library science. In late 1975, the Federal Government employed about 3,300 professional librarians.

Most librarians work in cities and towns. Those attached to bookmobile units serve widely scattered population groups.

Training, Other Qualifications, and Advancement

A professional librarian ordinarily must complete a 1-year master's degree program in library science. A Ph. D. degree is an advantage to those who plan a teaching career in library schools or who aspire to a top administrative post, particularly in a college or university library or in a large library system. For those who are interested in the special libraries field, a master's degree or doctorate in the subject of the library's specialization is highly desirable.

In 1976, 58 library schools in the United States were accredited by the American Library Association and offered a master's degree in library science (M.L.S.). In addition, many other colleges offer graduate programs or courses within 4-year undergraduate programs.

Most graduate schools of library science require graduation from an accredited 4-year college or university, a good undergraduate record, and a reading knowledge of at least one foreign language. Some schools also require introductory undergraduate courses in library science. Most prefer a liberal arts background with a major in an area such as the social sciences, the arts, or literature. Some schools require entrance examinations.

Library science students usually specialize in the area in which they plan to work. An aspiring information science specialist, for example, takes courses on data processing fundamentals and computer languages in addition to the required library science courses. A student wishing to become a media specialist concentrates on courses in the use and development of audio-visual materials. Special librarians and information science specialists must have extensive knowledge of their subject matter as well as training in library science. They usually earn a bachelor's or higher degree in chemistry, for example, plus a master's or Ph. D. in library or information science.

Most States require that public school librarians be certified and trained both as teachers and librarians. They also may require that media specialists, for example, have specialized in media within the M.L.S. program. Some States require certification of public librarians employed in areas such as municipal, county, or regional library systems. The specific education and experience necessary for certification vary according to State and the school district. The local superintendent of schools and the State department of education can provide information about specific requirements in an area.

In the Federal Government, beginning positions require completion of a 4-year college course and a master's degree in library science, or demonstration of the equivalent in experience and education by a passing grade on an examination.

Many students attend library schools under cooperative work-study programs that combine the academic program with practical work experience in a library. Scholarships for training in library science are available under certain State and Federal programs and from library schools, as well as from a number of the large libraries and library associations. Loans, assistantships, and financial aid also are available.

Experienced librarians may advance to administrative positions or to specialized work. Promotion to

these positions, however, is limited primarily to those who have completed graduate training in a library school, or to those who have specialized training.

Employment Outlook

The employment outlook for librarians is expected to be somewhat competitive through the mid-1980's. Although employment in the field is expected to grow over the period, the supply of persons qualified for librarianship is likely to expand as an increasing number of new graduates and labor force reentrants seek jobs as librarians.

Employment prospects are expected to be best in public libraries. The growth of a better educated population coupled with greater emphasis on adult and community education programs will require additional librarians. The educationally disadvantaged, the handicapped, and various minority groups also will need qualified librarians to provide special services. Also, the expanding use of computers to store and retrieve information will contribute to the increased demand for information specialists and library automation specialists in all types of libraries.

The demand for school librarians on the other hand, will not increase significantly. Enrollments in higher education, however, are expected to rise until the mid-1980's, resulting in a greater number of librarians in post-high school institutions.

In addition to openings from growth, replacements will be needed each year for librarians who retire, die, transfer to other types of work, or leave the labor force.

Employment opportunities will vary not only by type of library but also by the librarian's educational qualifications and area of specialization. Although the overall employment outlook is competitive, persons who are willing to work in libraries located away from the large East or West Coast cities will have better opportunities. New graduates having more recent training may have an employment advantage over reentrants, delayed entrants, or those who transfer into the profession. This is especially true for those wanting positions as information specialists where knowledge of the latest computer technologies is important. New graduates usually command lower beginning salaries, compared to more experienced workers, and this also may be an employment advantage.

Earnings and Working Conditions

Salaries of librarians vary by type of library, the individual's qualifications, and the size and geographical location of the library.

Starting salaries of graduates of library school master's degree programs accredited by the American Library Association average $10,594 a year in 1975, ranging from $9,692 in public libraries to $10,900 in school libraries. Average salaries for librarians in college and university libraries ranged from $11,400 a year for those with less than 5 years of experience to over $20,000 for directors of libraries. In general, librarians earned about 1 1/2 times as much as the average for all nonsupervisory workers in private industry, except farming.

In the Federal Government, the entrance salary for librarians with a master's degree in library science was $14,097 a year in 1977. The average salary for all librarians in the Federal Government was about $20,000.

The typical workweek for librarians is 5 days, ranging from 35 to 40 hours. The work schedule of public and college librarians may include some weekend and evening work. School librarians generally have the same workday schedule as classroom teachers. A 40-hour week during normal business hours is common for government and other special librarians.

The usual paid vacation after a year's service is 3 to 4 weeks. Vacations may be longer in school libraries, and somewhat shorter in those operated by business and industry. Many librarians are covered by sick leave; life, health, and accident insurance; and pension plans.

Sources of Additional Information

Additional information, particularly on accredited programs and scholarships or loans, may be obtained from:

American Library Association, 50 East Huron St., Chicago, Ill. 60611.

For information on requirements for special librarians, write to:

Special Libraries Association, 235 Park Ave., South, New York, N.Y. 10003.

Information on Federal assistance for graduate school library training under the Higher Education Act of 1965 is available from:

Office of Libraries and Learning Resources, Office of Education, U.S. Department of Health, Education, and Welfare, Washington, D.C. 20202.

Those interested in a career in Federal libraries should write to:

Secretariat, Federal Library Committee, Room 310, Library of Congress, Washington, D.C. 20540.

Material on information science specialists may be obtained from:

American Society for Information Science, 1140 Connecticut Ave. NW., Washington, D.C. 20036.

Individual State library agencies can furnish information on scholarships available through their offices, on requirements for certification, and general information about career prospects in their regions. State boards of education can furnish information on certification requirements and job opportunities for school librarians.

LIBRARY TECHNICIANS AND ASSISTANTS

(D.O.T. 249.368)

Nature of the Work

Each year thousands of additional pieces of information become available to libraries. With each scientific advance, for example, many reports and evaluations are written. Professionals in various fields continually conduct research, whether on improved methods to grow house plants

or on American foreign policy. The sheer volume of these materials, coupled with an increasing number of library services, has created a need for library technicians and assistants to support librarians in providing information.

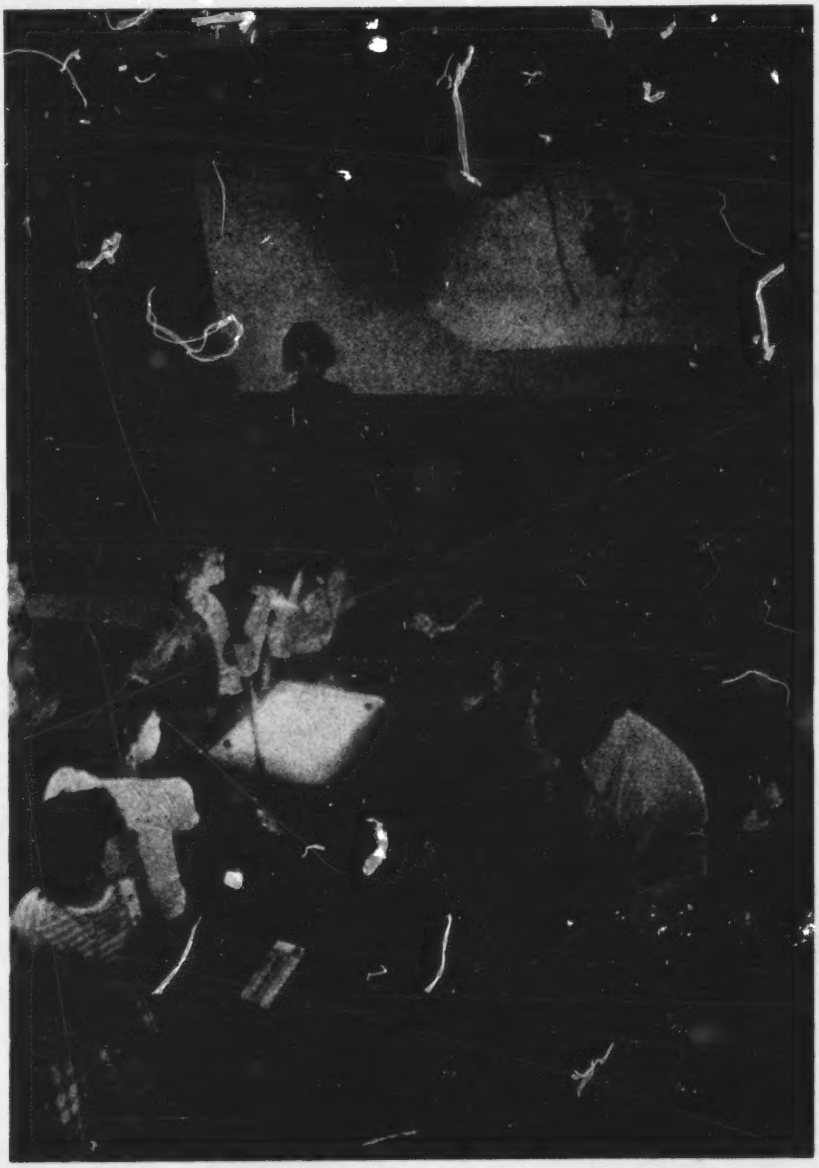
Library technicians and assistants work either in technical services or user services. Technicians, however, usually need more training than library assistants, sometimes called library clerks or pages, because their duties are more complicated and less clerical in nature.

In technical services, assistants and technicians prepare the library's materials and equipment for readers' use. Assistants may keep current files of special materials, such as newspaper clippings and pictures. They also may perform many of the routine tasks involved in purchasing and processing library materials, and sorting and shelving books.

Technicians often operate and maintain audiovisual and data processing equipment, such as projectors, tape recorders, and readers that magnify and project information on a screen. They also may catalog materials and make claims for items that are missing. Technicians sometimes work on special projects. A technician with artistic ability, for example, may design posters and displays for a school safety campaign.

In user services, library assistants and technicians furnish information on library services and answer questions that involve simple factfinding in standard reference sources. They also assist readers in the use of catalogs and indexes to locate books and other materials and may check out, reserve, and receive materials.

Technicians also may help librarians present programs to the community, school, or persons interested in a specific subject area. The technician may run a projector and pass out materials in a program on lawn care, for example.



Library technicians and assistants may operate and maintain audiovisual equipment.

Places of Employment

An estimated 143,000 people worked as library technicians and assistants in 1976. Most worked in large school and public libraries. Smaller numbers worked in college and university libraries and in medical, law, scientific, technical, and other special libraries.

In late 1975 the Federal Government employed about 3,600 library technicians. These people worked chiefly in the Department of Defense and the Library of Congress, although some worked in small Federal libraries throughout the country.

Training, Other Qualifications, and Advancement

Library technicians and assistants may receive training either on the job or in a formal post-high school program. Some libraries require only a high school education for library clerks, who, after a few years of training on the job, may advance to technicians. Other libraries hire only technicians who have formal technical training.

In 1976, 120 institutions, mostly 2-year colleges, offered library techni-

cal assistant training. Junior and community college programs generally lead to an associate of arts degree in library technology and include 1 year of liberal arts courses and a year of library-related study. Students study the purposes and organization of libraries, and the procedures and processes involved in their operation. They learn to order and process, catalog, and circulate library materials. Some receive training in data processing as it applies to libraries. Many learn to use and maintain audiovisual materials and equipment.

Some programs teach skills for a particular type of library or a specific skill such as audiovisual technology. Therefore, a prospective student should select a program with a knowledge of the curriculum, instructional facilities, faculty qualifications, and the kinds of jobs that graduates have found. Also, applicants should be aware that, while programs may lead to an associate degree, credits earned in a library technology program apply toward a professional degree in library science.

A high school diploma or its equivalent is the standard requirment for both academic and on-the-job training programs. Many programs also require typing.

Library technicians and assistants should enjoy working with books, numbers, and people. At times their jobs may be very repetitive, when calculating circulation statistics, for example. At other times, however, they may work on various special projects such as setting up displays. Physically, the job may require much standing, stooping, bending, and reaching.

Employment Outlook

The number of library technicians and assistants is expected to grow faster than the average for all occupations through the mid-1980's. The expansion of library services and the growth in population and school and college enrollments will be the main factors affecting demand for library assistants and technicians. In addition, technicians and assistants will increasingly perform some of the routine tasks formerly done by librarians.

In addition to openings created by growth, many library technicians and assistants will be needed annually to replace those who die, retire, or transfer to other fields.

Earnings and Working Conditions

Salaries for library technicians and assistants vary widely depending on the size of the library or library system in which they work as well as the geographical location and size of the community. However, in general, they averaged about the same as all nonsupervisory workers in private industry, except farming.

Salaries of library technicians in the Federal Government, averaged $11,000 in 1976.

Library technicians and assistants in government and special libraries usually work a regular 40-hour week, but those in public libraries and college and university libraries may have schedules that include weekend and evening hours. In schools, library technicians and assistants work during regular school hours.

Most libraries provide fringe benefits such as group insurance and retirement pay. Additional benefits offered by private businesses often include educational assistance programs. Library technicians employed by the Federal Government receive the same benefits as other Federal workers.

Sources of Additional Information

For information on institutions offering programs for the training of library technicians, write:

Council on Library Technical-Assistants, School Management Institute, 750 Brooksedge Blvd., Westerville, Ohio 43081.

American Library Association, Office of Library Personnel Resources, 50 East Huron St., Chicago, Ill. 60611.

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What to Look For in this Reprint

To make the *Occupational Outlook Handbook* easier to use, each occupation or industry follows the same outline. Separate sections describe basic elements, such as work on the job, education and training needed, and salaries or wages. Some sections will be more useful if you know how to interpret the information as explained below.

The TRAINING, OTHER QUALIFICATIONS, AND ADVANCEMENT section indicates the preferred way to enter each occupation and alternative ways to obtain training. Read this section carefully because early planning makes many fields easier to enter. Also, the level at which you enter and the speed with which you advance often depend on your training. If you are a student, you may want to consider taking those courses thought useful for the occupations which interest you.

Besides training, you may need a State license or certificate. The training section indicates which occupations generally require these. Check requirements in the State where you plan to work because State regulations vary.

Whether an occupation suits your personality is another important area to explore. For some, you may have to make responsible decisions in a highly competitive atmosphere. For others, you may do only routine tasks under close supervision. To work successfully in a particular job, you may have to do one or more of the following:

- motivate others
- direct and supervise others
- work with all types of people
- work with things—you need good coordination and manual dexterity
- work independently—you need initiative and self-discipline
- work as part of a team
- work with details, perhaps numbers or laboratory reports
- help people
- use creative talents and ideas
- work in a confined area
- do physically hard or dangerous work
- work outside in all types of weather

A counselor can help you find out more about your interests and abilities so you can judge whether a job's characteristics suit you.

The EMPLOYMENT OUTLOOK section tells whether or not the job market is likely to be favorable. Usually an occupation's expected growth is compared to the average projected growth rate for all occupations (20.1 percent between 1976 and 1985). The following phrases are used:

Much faster	50% or more
Faster	25.0 to 49.9%
About as fast	15.0 to 24.9%
Slower	4.0 to 14.9%
Little change	3.9 to -3.9%
Decline	-4.0% or more

Generally, job opportunities are favorable if employment is growing at least as fast as for the economy as a whole.

But, you would have to know the number of people competing with you to be sure of your prospects. Unfortunately, this supply information is lacking for most occupations.

There are exceptions, however, especially among professional occupations. Nearly everyone who earns a medical degree, for example, becomes a practicing physician. When the number of people pursuing relevant types of education and training and then entering the field can be compared with the demand, the outlook section indicates the supply/demand relationship as follows:

Excellent	Demand much greater than supply
Very good	Demand greater than supply
Good or favorable	Rough balance between demand and supply
May face competition	Likelihood of more supply than demand
Keen competition	Supply greater than demand

Competition or few job openings should not stop your pursuing a career that matches your aptitudes and interests. Even small or overcrowded occupations provide some jobs. So do those in which employment is growing very slowly or declining.

Growth in an occupation is not the only source of job openings because the number of openings from turnover can be substantial in large occupations. In fact, replacement needs are expected to create 70 percent of all openings between 1976 and 1985.

Finally, job prospects in your area may differ from those in the Nation as a whole. Your State employment service can furnish local information.

The EARNINGS section tells what workers were earning in 1976.

Which jobs pay the most is a hard question to answer because good information is available for only one type of earnings—wages and salaries—and not even this for all occupations. Although 9 out of 10 workers receive this form of income, many earn extra money by working overtime, night shifts, or irregular schedules. In some occupations, workers also receive tips or commissions based on sales or service. Some factory workers are paid a piece rate—an extra payment for each item they make.

The remaining 10 percent of all workers—the self-employed—includes people in many occupations—physicians, barbers, writers, and farmers, for example. Earnings for self-employed workers even in the same occupation differ widely because much depends on whether one is just starting out or has an established business.

Most wage and salary workers receive fringe benefits, such as paid vacations, holidays, and sick leave.

Workers also receive income in goods and services (payment in kind). Sales workers in department stores, for example, often receive discounts on merchandise.

Despite difficulties in determining exactly what people earn on the job, the Earnings section does compare occupational earnings by indicating whether a certain job pays more or less than the average for all nonsupervisors in private industry, excluding farming.

Each occupation has many pay levels. Beginners almost always earn less than workers who have been on the job for some time. Earnings also vary by geographic location but cities that offer the highest earnings often are those where living costs are most expensive.

What's an ad for the OOQ doing in a place like this?

The career information contained in the reprint you are reading was taken from the 1978–79 edition of the Occupational Outlook Handbook. But the Handbook is not the only source of useful career information published by the Bureau of Labor Statistics. The Handbook's companion, the Occupational Outlook Quarterly, is published four times during the school year to keep subscribers up to date on new occupational studies completed between editions of the Handbook. The Quarterly also gives practical information on training and educational opportunities, salary trends, and new and emerging jobs—just what people need to know to plan careers.

If you were a subscriber to recent issues of the Occupational Outlook Quarterly, you could have learned

- how to write an effective employment resume
- what the long-term employment prospects are for college graduates
- ways to earn college credit without going to college
- what's happening in the field of career education
- about career possibilities in such fields as journalism, mid-wifery, and shorthand reporting.

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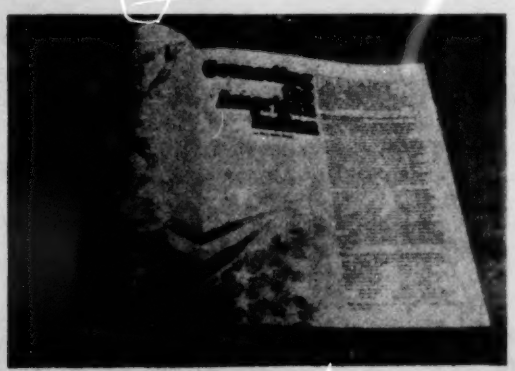

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